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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,013	07/13/2000	Yoshihiro Ishikawa	15689.53	3923

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EXAMINER

ORGAD, EDAN

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 03/12/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/616,013

Applicant(s)

ISHIKAWA ET AL.

Examiner

Edan Orgad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,12,24-27,29 and 30 is/are allowed.
- 6) ☒ Claim(s) 1,13 and 28 is/are rejected.
- 7) ☒ Claim(s) 2-10 and 14-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 13 & 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kondo (US 6,650,686).

Regarding claims 1, 13 and 28, Kondo teaches a cell search control method by which a mobile station searches for a perch channel transmitted by a base station to capture and receive the perch channel, and determines which base station to communicate with or to be standby (col. 3, lines 57-67) for, said cell search control method comprising: a measuring step of measuring receiving quality of a currently captured perch channel; and a control step of determining a degree of how frequent searches for new perch channels are conducted in response to the receiving quality measured by said measuring step (col. 4, lines 9-19, col. 19, lines 21-36 & col. 20, lines 20-29).

Allowable Subject Matter

Claims 2-10 & 14-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2 and 14, the prior art of record fails to specifically disclose a control step of controlling a frequency of searching for a new perch channel in response to the lowest transmission power measured by said measuring step such that when the lowest transmission power is high, the frequency of searching for a new perch channel is high, whereas when the lowest transmission power is low, the degree of how frequent searches for new perch channels are conducted is low. More specifically, that a degree of how frequent searches for new perch channels are conducted is controlled in response to the lowest transmission power of measured transmission power (transmission power at time of transmitting a signal to a base station that a mobile station currently communicate with or is currently standby for) such that when the lowest transmission power is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the lowest transmission power is low, the frequency of searching for a new perch channel is low.

Regarding claims 3 and 15, the prior art of record fails to specifically disclose said control step controls the degree of how frequent searches for new perch channels are conducted in response to the ratio of the second highest received power to the highest received power measured by said measuring step such that when the ratio is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the ratio is low, the frequency of searching for a new perch channel is low.

Regarding claims 4 and 16, the prior art of record fails to specifically disclose said control step controls the degree of how frequent searches for new perch channels are conducted in response to the number of perch channels with received power whose ratio to the highest received power measured by said measuring step is greater than a predetermined value such that

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when the number of perch channels is great, the degree of how frequent searches for new perch channels are conducted is high, whereas when the number of perch channels is small, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 5 and 17, the prior art of record fails to specifically disclose said measuring step measures a received SIR of the currently captured perch channel; and said control step controls the degree of how frequent searches for new perch channels are conducted in response to the highest received SIR measured by said measuring step such that when the highest received SIR is high, the degree of how frequent searches for new perch channels are conducted is low, whereas when the highest received SIR is low, the degree of how frequent searches for new perch channels are conducted is high.

Regarding claims 6 and 18, the prior art of record fails to specifically disclose said control step controls the degree of how frequent searches for new perch channels are conducted in response to the ratio of the second highest received SIR to the highest received SIR measured by said measuring step such that when the ratio is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the ratio is low, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 7 and 19, the prior art of record fails to specifically disclose said control step controls the degree of how frequent searches for new perch channels are conducted in response to the number of perch channels with a received SIR whose ratio to the highest received SIR measured by said measuring step is greater than a predetermined value such that when the number of perch channels is great, the degree of how frequent searches for new perch

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channels are conducted is high, whereas when the number of perch channels is small, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 8 and 20, the prior art of record fails to specifically disclose said measuring step measures received power of a currently captured perch channel; and said control step obtains a propagation loss between the mobile station and a base station that transmits the perch channel from the received power measured by said measuring step and the transmission power of the perch channel with the received power extracted by said extracting step, and controls the degree of how frequent searches for new perch channels are conducted in response to the minimum propagation loss obtained such that when the minimum propagation loss is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the minimum propagation loss is low, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 9 and 21, the prior art of record fails to specifically disclose said measuring step measures received power of a currently captured perch channel; and said control step obtains a propagation loss between the mobile station and a base station that transmits the perch channel from the received power measured by said measuring step and the transmission power of the perch channel with the received power extracted by said extracting step, and controls the degree of how frequent searches for new perch channels are conducted in response to the ratio of the second minimum propagation loss to the minimum propagation loss obtained such that when the ratio is low, the degree of how frequent searches for new perch channels are conducted is high, whereas when the ratio is high, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 10 and 22, the prior art of record fails to specifically disclose said measuring step measures received power of a currently captured perch channel; and said control step obtains a propagation loss between the mobile station and a base station that transmits the perch channel from the received power measured by said measuring step and the transmission power of the perch channel with the received power extracted by said extracting step, and controls the degree of how frequent searches for new perch channels are conducted in response to the number of perch channels with a propagation loss whose ratio to the minimum propagation loss obtained is less than a predetermined value such that when the number of the perch channels is great, the degree of how frequent searches for new perch channels are conducted is high, whereas when the number of the perch channels is small, the degree of how frequent searches for new perch channels are conducted is low.

Claims 11, 12, 24-27, 29 and 30 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 11, 24 and 29, the prior art of record fails to specifically disclose a mobile station searches for a perch channel transmitted by a base station to capture and receive the perch channel, and determines which base station to communicate with or to be standby for, said cell search control method comprising: a measuring step of measuring transmission power of a signal to be transmitted to the base station that the mobile station currently communicate with or is currently standby for; and a control step of controlling a frequency of searching for a new perch channel in response to the lowest transmission power measured by said measuring

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step such that when the lowest transmission power is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the lowest transmission power is low, the degree of how frequent searches for new perch channels are conducted is low. More specifically, that a degree of how frequent searches for new perch channels are conducted is controlled in response to the lowest transmission power of measured transmission power (transmission power at time of transmitting a signal to a base station that a mobile station currently communicate with or is currently standby for) such that when the lowest transmission power is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the lowest transmission power is low, the degree of how frequent searches for new perch channels are conducted is low.

Regarding claims 12, 26 and 30, the prior art of record fails to specifically disclose a method by which a mobile station searches for a perch channel transmitted by a base station to capture and receive the perch channel, and determines which base station to communicate with or to be standby for said cell search control method comprising: a detecting step of detecting a moving speed of the mobile station; and a controlling step of controlling a degree of how frequent searches for new perch channels are conducted in response to the moving speed detected by said detecting step such that when the moving speed is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the moving speed is low, the degree of how frequent searches for new perch channels are conducted is low. More specifically, that a degree of how frequent searches for new perch channels are conducted is controlled in response to a detected moving speed such that when the moving speed is high, the degree of how frequent searches for new perch channels are conducted is high, whereas when the

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moving speed is low, the degree of how frequent searches for new perch channels are conducted is low.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 1-10, 13-23 & 28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2003/0099209 Method and system for controlling the transmission power of certain parts of a radio transmission.

US 2002/0169005 Base station apparatus and radio communication method.

US 6,665,277 Comma free codes for fast cell search using tertiary synchronization channel.

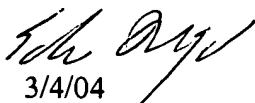
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edan Orgad whose telephone number is 703-305-4223. The examiner can normally be reached on 8:00AM to 5:30PM with every other Friday off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 703-305-4223. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edan Orgad


3/4/04


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SUPERVISORY PATENT EXAMINER